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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,264	12/03/2003	Kirk E. Newman		4000

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Office of Counsel Code OC4
Naval Surface Warfare Center
Indian Head Division
101 Strauss Ave., Bldg. D-31
Indian Head, MD 20640-5035

EXAMINER	
GELLNER, JEFFREY L	
ART UNIT	**PAPER NUMBER**
3643	

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07/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/729,264	NEWMAN ET AL.	
	Examiner	Art Unit	
	Jeffrey L. Gellner	3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33,47 and 48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33, 47, 48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The amended paragraphs received 27 April 2007 are accepted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-33, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takita (EP 0959057 A1) in view of Brown et al. (US 4,764,316).

As to claims 1, 10, 24, and 48, Takita discloses an article of manufacture or a pressable or pressed thermobaric explosive composition (see col. 4, para. 0031) comparing a substantially uncoated fuel particle (from "mixed with a fuel" from col. 4 para. 0029), mechanically blended with oxidizer that is coated (from col. 3 para. 0019) with a binder (col. 4 para. 0025 and 0026), the fuel being at least 40% of total composition weight (from Takita at Table 1 of col. 8 for the last example listed where the fuel, glucose, is 50% of the composition). Not disclosed is the oxidizer being a nitramine. Brown et al., however, discloses a nitramine as an oxidizer mixed with a fuel and binder (col. 5 lines 11-22). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the composition of Takita by using a nitramine as the fuel as disclosed by Brown et al. depending upon use (see Takita at col. 4 para. 0030).

As to claims 2, 11, 25, the limitations of claims 1, 10, and 24 are disclosed as described above. Takita further discloses the binder being 10% (from Table 1 of col. 8 for the third example listed where the binder, talc, is 10% of the composition). Not disclosed is the binder 1 to 6 percent of the composition. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by having the binder at from 1 to 6 percent depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 3, 12, and 28, the limitations of claims 1, 10, and 24 are disclosed as described above. Takita as modified by Brown et al. further disclose the fuel being aluminum (Takita at col. 4 lines 33-36; Brown et al. at col. 5 lines 11-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by using aluminum as the fuel depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 4, 13, and 29, the limitations of claims 1, 10, and 28 Takita as modified by Brown et al. further disclose the fuel from 50 to 70 weight percent (from Takita at Table 1 of col. 8 for the last example listed where the fuel, glucose, is 50% of the composition).

As to claims 5, 14, and 30, the limitations of claims 1, 10, and 28 are disclosed as described above. Not disclosed is the uncoated fuel from 60 to 70 weight percent. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by having the fuel from 60 to 70 weight percent depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 6, 15, and 31, the limitations of claims 1, 10, and 28 are disclosed as described above. Not disclosed are the fuel particles with diameters of about 1 to 5 microns. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by having the fuel particles with diameters of about 1 to 5 microns depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claim 7, the limitations of claim 1 are disclosed as described above. Takita as modified by Brown et al. further disclose the oxidizer being HMX (Brown et al. at col. 5 lines 11-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by using HMX as the oxidizer depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 8, 16, and 32, the limitations of claims 1, 10, and 28 are disclosed as described above. Takita as modified by Brown et al. further disclose the oxidizer being an ionic salt ("ammonium perchlorate" of Brown et al. at col. 5 lines 11-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by using an ionic salt depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 9, 17, and 33, the limitations of claims 7, 16, and 33 are disclosed as described above. Not disclosed is fuel, the nitramine, and the ionic salt being from 92 to 99 percent of weight of the composition. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown

et al. by having fuel, the nitramine, and the ionic salt being from 92 to 99 percent of weight of the composition depending upon use of the composition (from Takita at col. 4 para. 0030).

As to claims 18-23, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by having the composition meet these limitations so as to achieve the desired characteristics for the fuel and uses for the composition.

As to claims 26 and 27, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the composition of Takita as modified by Brown et al. by having the composition used with these structural limitations so as to achieve the desired use for the composition.

As to claim 47, Takita as modified by Brown et al. further disclose the free fuel particles being unencapsulated (from Takita at col. 4 para. 0030).

Response to Arguments

Applicants' arguments filed 27 April 2007 with respect to all claims have been considered but are moot for the arguments concerning Hodgson in view of the new ground(s) of rejection. Applicants' other arguments been fully considered but they are not persuasive. Applicants argue that: (1) Takita and Brown deal with different goals (Takita to reduce sensitivity; Brown to overcome manufacturing difficulties) so there combination is improper and may teach away from each other (Remarks middle of page 11); (2) neither Takita nor Brown disclose the fuel being at least 40% of the total composition (Remarks bottom of page 11); and,

(3) neither Takita nor Brown disclose the fuel being free and uncoated (generally from Remarks at middle of page 16).

As to argument (1), Brown et al. is used for the disclosure that either RDX or HMX can be used as an oxidizer (Brown et al. at col. 5 lines 11-16) when aluminum is used as a fuel (Brown et al. at col. 5 lines 11-16). Takita discloses that a coated oxidizer can be used aluminum as the fuel (Takita at col. 4 lines 33-36). Hence, the combination is proper because both references concern composition of a fuel and oxidizer, the fuel being aluminum.

As to argument (2), Takita discloses the fuel being greater than 40% of the total composition as explained in the rejections above.

As to argument (3), Takita implicitly discloses the fuel being free and uncoated. Takita discloses that the "type of fuel to be mixed with the coated oxidizer" implies that the fuel is not coated in contradiction to the "coated oxidizer" at col. 4 lines 27-29. Further, Takita discloses the fuel being "aluminum," "magnesium," "ADCA," and "tetrazoles" at col. 4 para. 0030. To one of ordinary skill in the art of exothermic compositions these four fuels are well known to be particles which a mixed with the oxidizer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Gellner whose telephone number is 571.272.6887. The examiner can normally be reached on Monday-Friday, 8:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571.272.6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey L. Gellner
Primary Examiner
Art Unit 3643